

Modulating Actuator Motor

DMA Series

DUNGS[®]
Combustion Controls



UL Recognized

- UL File # E142163
- UL 873
- CSA C22.2 No. 24-93

CSA Certified

- CSA File # 1378915
- UL 429
- CSA C22.2 #139

Compliant to the EU Low Voltage and EMC Directive

US and Canadian Models

- DMA 6C120
- DMA 12C120
- DMA 30C120

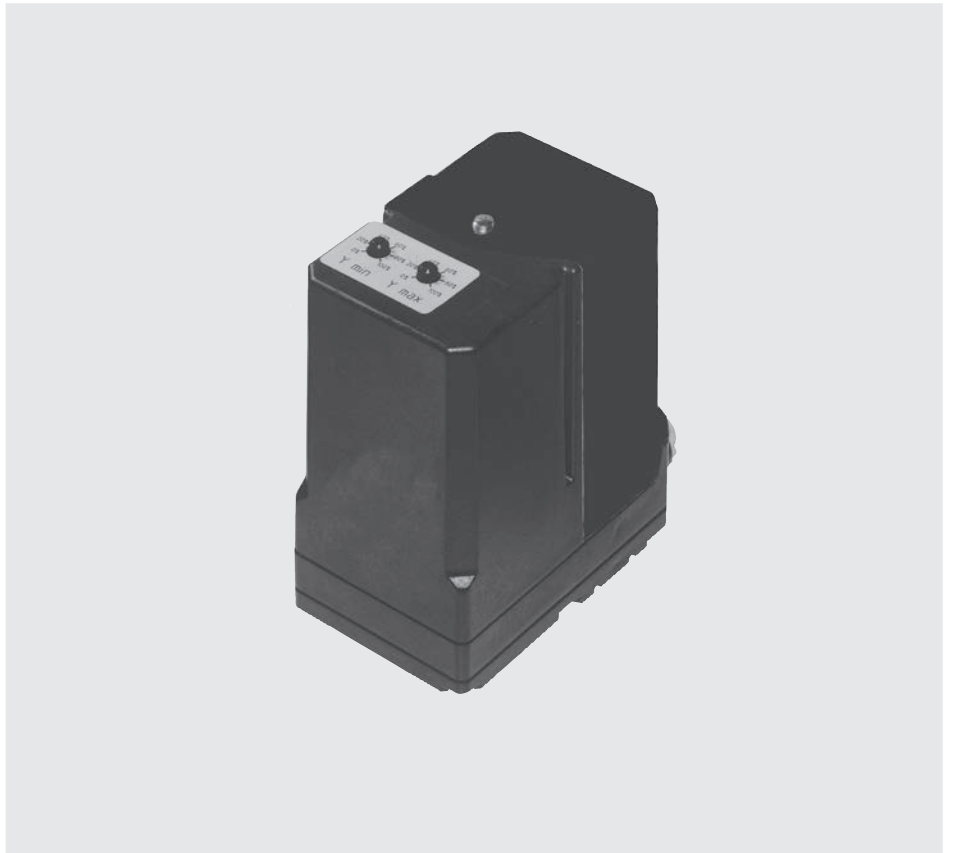
Commonwealth of Massachusetts Approved Product

- Approval code G1-1107-35
- Actuator Drive for Gas Butterfly valve.

Codes and Standards:

This product is intended for installations covered by but not limited to NFPA 86, ANSI Z83.4/CSA 3.7, ANSI Z83.18/CSA 4.9, ANSI Z21.13, CSD-1, UL 795, or CSA B149.3.

DUNGS is an ISO 9001 manufacturing facility.



Technical description

The DMA actuator drives from 0° to 90° via a 4 to 20 mA input signal. It can move in any direction and stop anywhere over the entire 90° stroke. The field adjustable stroke is factory set at 90° and the position is factory set at 0°.

The DMA is available in three different set speeds: 6 s, 12 s or 30 s. The DMA has one independent, field adjustable auxiliary SPDT switch and two field adjustable limit switches.

During power interruption, the actuator will remain stationary. After power is restored, the position is determined by the controller input signal. However, if the 4 to 20 mA signal is interrupted and the DMA is still powered, the actuator will drive fully CW (towards 0°), which will

close the DMK butterfly control valve.

4 to 20 mA feedback can be used to drive a slave motor (3 actuators maximum in parallel).

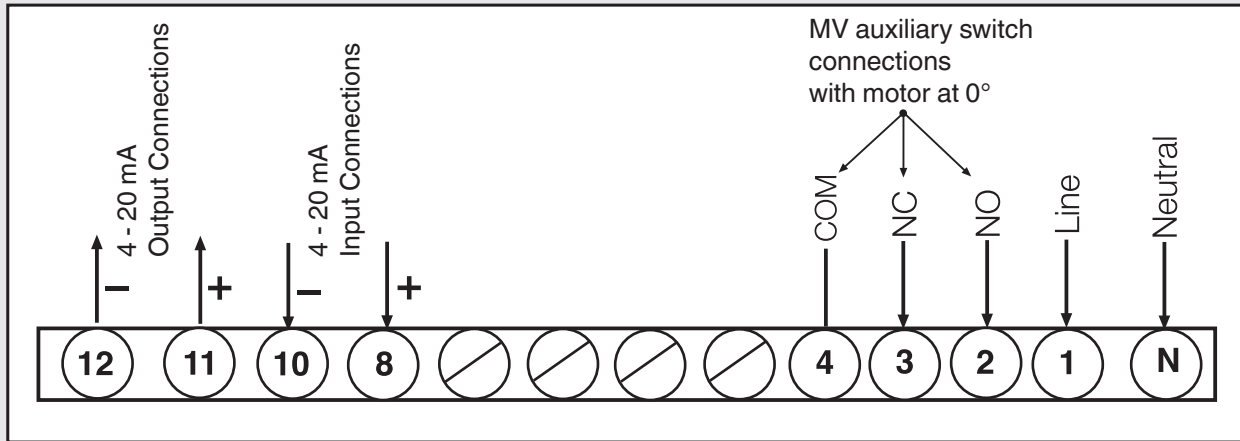
Maximum stroke (Y max; span) is adjustable from 25° to 90°, and minimum stroke (Y min; zero) is adjustable from 0° to 75% of the set span (maximum stroke).

Application

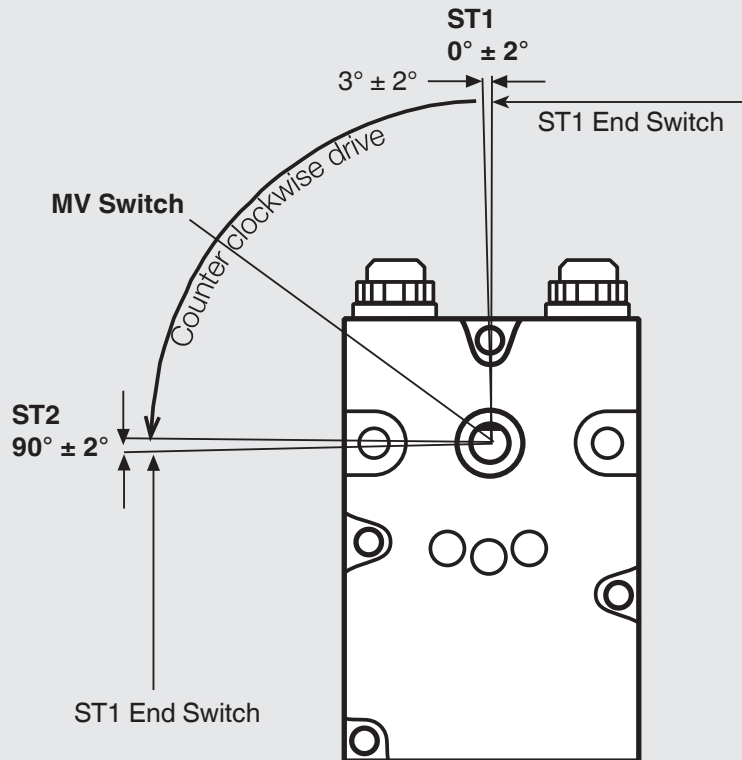
When mounted on the DMK butterfly control valve, the DMA is used to automatically modulate the amount of natural gas, butane, propane and/or air supplied to the burner.

Specifications	DMA 6C120	DMA 12C120	DMA 30C120
Operating time for 90° stroke	6 s	12 s	30 s
Resolution (max)	0.256 mA resolution; minimum of 1.6° per step		
Electrical ratings	110 - 120 VAC 50 - 60 Hz		
Power rating	Holding: max. 2.0 VA Operation: max. 5.4 VA		
Enclosure rating	NEMA 1		
Electrical connection	Screw terminals with 1/2" NPT conduit connection		
Operation time	100 % duty cycle		
Ambient temperature rating	+15 °F to +120 °F (-10 °C to 50 °C)		
Limit Switches (ST)	Two field adjustable switches: min and max: limit stroke of actuator.		
Auxiliary Switch (MV)	One SPDT, field adjustable switch. 10.5 A resistive, 10.5 A FLA, 9 A LRA @ 120 VAC		
Operating mode	Automatic		
Input Control	4 to 20 mA, 30 mA max.		
Position Feedback/Output (for slave actuating or actual shaft position verification)	4 to 20 mA; max impedance for output is 500 Ohm.		
Holding Torque	6 s (12.4 in-lb)	12 s (24.8 in-lb)	30 s (26.5 in-lb)
Operating Torque	6 s (5.3 in-lb)	12 s (8.9 in-lb)	30 s (17.7 in-lb)
Mounting Position	Multipoised		
Weight	1.21 lbs (0.5 kg)		
Direction of Rotation	Counterclockwise		

Wiring diagram



Actuator operation (view from bottom of DMA)

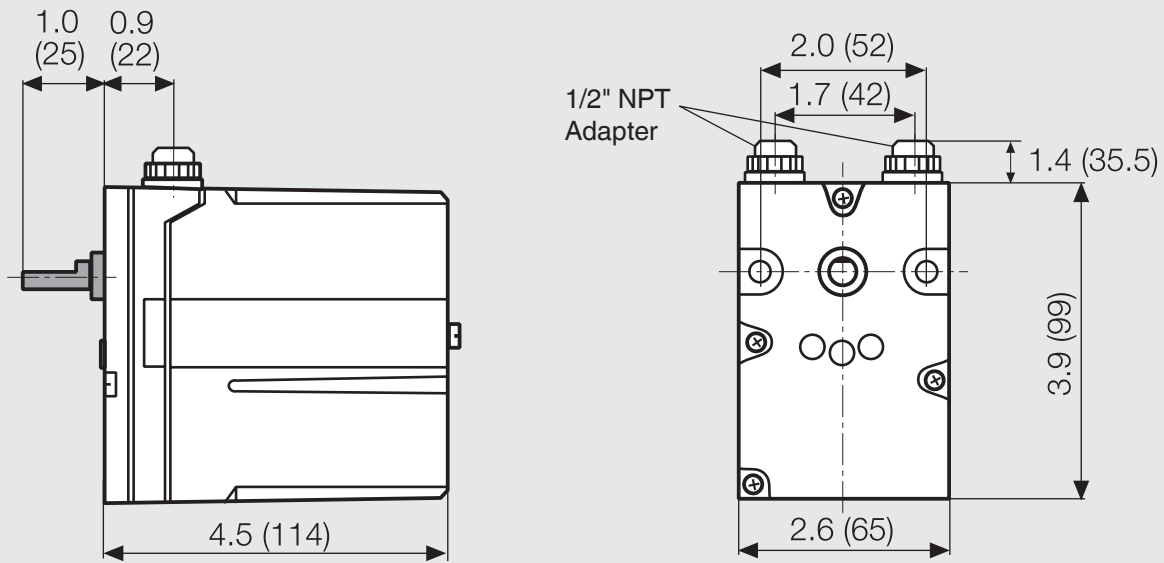


Modulating Actuator Motor

DMA Series



Dimensions inch (mm)



Type	Order No.
DMA 6C120*	267251
DMA 12C120	267252
DMA 30C120	267253

We reserve the right to make any changes in the interest of technical progress.



Karl Dungs, Inc.
3890 Pheasant Ridge Drive NE
Suite 150
Blaine, MN 55449, U.S.A.
Phone 763 582-1700
Fax 763 582-1799
e-mail info@karldungsusa.com
Internet <http://www.dungs.com/usa/>

Karl Dungs GmbH & Co. KG
P.O. Box 12 29
D-73602 Schorndorf, Germany
Phone +49 (0)7181-804-0
Fax +49 (0)7181-804-166
e-mail info@dungs.com
Internet <http://www.dungs.com>